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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/500,704

02/25/2005

Andre Van Dyk

2004 1031a

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07/07/2006

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EXAMINER

HOLMAN, JOHN D

ART UNIT

PAPER NUMBER

3643

DATE MAILED: 07/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/500,704

Applicant(s)

VAN DYK ET AL.

Examiner

John D. Holman

Art Unit

3643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: Foreign Reference.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 17-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Arai (EP 0872317).

Regarding claim 17, Arai discloses an apparatus comprising a cartridge (3) that forms an enclosure, a combustible propellant (4) inside the enclosure, and at least one element (5) made of inert material exposed to the propellant (4) and initiates combustion of the propellant (4). See figure 1. The propellant is disclosed as being oil, which is a combustible propellant. See column 6, lines 37-46.

Regarding claim 18, Arai discloses an apparatus wherein the element (5) is made of aluminum. See figure 1 and column 6, lines 38-46.

Regarding claim 20, Arai discloses an apparatus wherein the cartridge (3) is cylindrical, has a base (7), and a domed end opposite to the base (7). See figure 1. Webster's dictionary defines malleable as "capable of being extended or shaped by beating with a hammer or by the pressure of rollers". Arai discloses the cartridge as made from synthetic resin or glass, both of which can be either extended or shaped by various means.

Regarding claim 21, Arai discloses an apparatus wherein the electrical leads (9) extend from the terminals on an outer side of the cartridge to the element. See figure 1.

Regarding claim 22, Arai discloses an apparatus wherein a removable closure (8) covers the terminals. See figure 1.

Regarding claim 23, Arai discloses an apparatus wherein the element (5) is mounted on a substrate (6) embedded in the propellant (4). See figure 1.

Regarding claim 24, Arai discloses an apparatus wherein a control device (111) is provided on the substrate (6). See figure 1.

Regarding claim 25, Arai discloses an apparatus wherein the element (5) is in the form of an elongated filament. See figure 1 and column 6, lines 37-46.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arai (EP 0872317). Arai discloses an apparatus wherein the element (5) is made of metal. See column 6, line 40. The claim differs from Arai's apparatus in calling for the element to be graphite. It would have been an obvious matter of design choice to use graphite, since the applicant has not disclosed that this particular metal solves any stated

problems or is for any particular purpose and it appears that the invention would perform equally well with aluminum.

Response to Arguments

Applicant's arguments filed 4/21/2006 have been fully considered but they are not persuasive. Arai discloses the use of oil as a breaking substance, which is a combustible material. Regarding the argument that Arai does not disclose a propellant, during the use of Arai's apparatus the breaking material is electrically charged and expanded. Therefore, it is said that the breaking material propels a force to the rock needed to be broken.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John D. Holman whose telephone number is 571 272-2754. The examiner can normally be reached on Monday through Friday 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Poon can be reached on 571 272-6891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JDH


PETER M. POON
SUPERVISORY PATENT EXAMINER
6/21/06